



IN REPLY  
REFER TO:

# United States Department of the Interior

MINERALS MANAGEMENT SERVICE

CENTRAL REGION

Oil and Gas Operations  
2000 Administration Building  
1745 West 1700 South  
Salt Lake City, Utah 84104

July 30, 1982

Shell Oil Company  
P.O. Box 831  
Houston, Texas 77001

Re: Application for Permit to Drill  
Well No. 21-19  
Section 19-T39S-R19E  
San Juan County, Utah  
Lease No. U-29967

Gentlemen:

Enclosed is your copy of the approved referenced Application for Permit to Drill.

Due to the environmental sensitivity of the area, it appears warranted that a joint onsite pre-construction conference, including the Bureau of Land Management, you and your construction personnel, and Minerals Management Service personnel, be held to be certain that all parties understand how the operations will be conducted. Please contact this office when you are ready to start operations so that a joint onsite pre-construction meeting can be coordinated and established.

Sincerely,

E. W. Gynn  
District Oil & Gas Supervisor

COPY

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
GEOLOGICAL SURVEY

OIL & GAS OPERATIONS

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

1a. TYPE OF WORK  
DRILL ☒ DEEPEN ☐ PLUG BACK ☐

b. TYPE OF WELL  
OIL WELL ☒ GAS WELL ☐ OTHER ☐ SINGLE ZONE ☒ MULTIPLE ZONE ☐

2. NAME OF OPERATOR  
Shell Oil Company

3. ADDRESS OF OPERATOR  
P. O. Box 831, Houston, Texas 77001 Attn. G. M. Jobe Rm 5468WCK

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.)\*  
At surface  
1190' FNL & 2490' FWL Section 19  
At proposed prod. zone

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE\*  
16 miles north of Mexican Hat, Utah

15. DISTANCE FROM PROPOSED\*  
LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT.  
(Also to nearest drlg. unit line, if any) 1190'  
117'

16. NO. OF ACRES IN LEASE  
2512.28

17. NO. OF ACRES ASSIGNED TO THIS WELL  
40

18. DISTANCE FROM PROPOSED LOCATION\*  
TO NEAREST WELL, DRILLING, COMPLETED, OR APPLIED FOR, ON THIS LEASE, FT.  
N/A

19. PROPOSED DEPTH  
2400'

20. ROTARY OR CABLE TOOLS  
Rotary

21. ELEVATIONS (Show whether DF, RT, GR, etc.)  
6279' GR

22. APPROX. DATE WORK WILL START\*  
Upon permit approval

5. LEASE DESIGNATION AND SERIAL NO.  
U-29967

6. IF INDIAN, ALLOTTEE OR TRIBE NAME  
SALT LAKE CITY, UTAH

7. UNIT AGREEMENT NAME

8. FARM OR LEASE NAME  
USA

9. WELL NO.  
21-19

10. FIELD AND POOL, OR WILDCAT  
Wildcat

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA  
NE 1/4 NW 1/4 Section 19  
T39S R19E

12. COUNTY OR PARISH  
San Juan

13. STATE  
Utah

23. PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT

SEE 10 POINT PLAN

ATTACHMENTS:

10 POINT PLAN - ATTACHMENT A  
BOP EQUIPMENT - ATTACHMENT B  
CHOKE MANIFOLD - ATTACHMENT C  
SURFACE USE PLAN - ATTACHMENT D  
SURVEY PLAT - ATTACHMENT E  
VICINITY TOPO MAP - ATTACHMENT F  
DRILL PAD LAYOUT - ATTACHMENT G  
DRILL PAD CROSS SECTIONS - ATTACHMENT H  
PRODUCTION FACILITIES LAYOUT - ATTACHMENT I  
ARCHAEOLOGY REPORT FORWARDED TO MINERALS MANAGEMENT SERVICE & BLM UNDER SEPARATE COVER

IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM: If proposal is to deepen or plug back, give data on present productive zone and proposed new productive zone. If proposal is to drill or deepen directionally, give pertinent data on subsurface locations and measured and true vertical depths. Give blowout preventer program, if any.

24. SIGNED S. M. Jobe TITLE Administrator  
Regulatory-Permits DATE 6/14/82

(This space for Federal or State office use)

PERMIT NO. \_\_\_\_\_ APPROVAL DATE \_\_\_\_\_  
APPROVED BY W. T. Martin FOR E. W. GUYNN  
CONDITIONS OF APPROVAL, IF ANY: \_\_\_\_\_ TITLE DISTRICT OIL & GAS SUPERVISOR DATE JUL 29 1982

NOTICE OF APPROVAL

CONDITIONS OF APPROVAL ATTACHED  
TO OPERATOR'S COPY

FLARING OR VENTING OF  
GAS IS SUBJECT TO NTL 4-A  
DATED 1/1/80

State Oil & Gas

CONDITIONS OF APPROVAL FOR NOTICE TO DRILL

Company Shell Oil Company Well No. 21-19  
Location Sec. 19-32S-19E Lease No. U-29967

A COPY OF THESE CONDITIONS SHOULD BE FURNISHED YOUR  
FIELD REPRESENTATIVE TO INSURE COMPLIANCE

All lease and/or unit operations are to be conducted in such a manner that full compliance is made with the applicable laws, regulations (30 CFR 221), and the approved plan of operations. The operator is considered fully responsible for the actions of his subcontractors. The following items are emphasized:

1. There shall be no deviation from the proposed drilling and/or workover program as approved. Safe drilling and operating practices must be observed. All wells, whether drilling, producing, suspended, or abandoned, shall be identified in accordance with 30 CFR 221.22. Any changes in operations must have prior approval of this office. Pressure tests are required before drilling out from under all casing strings set and cemented in place. Blowout preventer controls must be installed prior to drilling the surface casing plug and will remain in use until the well is completed or abandoned. Preventers will be inspected and operated at least daily to insure good mechanical working order, and this inspection recorded on the daily drilling report. Preventers will be pressure tested before drilling casing cement plugs. All BOP pressure tests must be recorded on the daily drilling report.
2. All shows of fresh water and minerals will be reported and protected. A sample will be taken of any water flows and furnished this office for analysis. All oil and gas shows will be adequately tested for commercial possibilities, reported and protected.
3. No location will be constructed or moved, no well will be plugged, and no drilling or workover equipment will be removed from a well to be placed in a suspended status without prior approval of this office. If operations are to be suspended, prior approval of this office must be obtained and notification given before resumption of operations.

In the event abandonment of the hole is desired, an oral request may be granted by this office, but must be timely followed within 15 days with a "Notice of Intention to Abandon" (form 9-331). Unless the plugging is to take place immediately upon receipt of oral approval, the District Supervisor must be notified at least 48 hours in advance of the plugging of the well in order that a representative may witness plugging operation. If a well is suspended or abandoned, all pits must be fenced immediately until they are backfilled. The "Subsequent Report of Abandonment" (form 9-331) must be submitted within 15 days after the actual plugging of the well bore, reporting where the plugs were placed, and the current status of the surface restoration. If surface restoration has not been completed at that time, a follow-up report on form 9-331 should be filed when all surface restoration work has been completed and the location is considered ready for final inspection.

4. The spud date will be reported orally to the District Supervisor's office within 48 hours after spudding. If the spudding occurs on a weekend or holiday, wait until the following regular workday to make this report.

Periodic drilling progress reports must be filed directly with the District Supervisor's office on a frequency and form or method as may be acceptable to the District Supervisor.

In accordance with NTL-1, this well must be reported on Form 9-329 "Monthly Report of Operations," starting with the month in which operations commence and continue each month until the well is physically plugged and abandoned. This report should be filed, in duplicate, directly with the U.S. Geological Survey Accounting, P.O. Box 2859, Casper, Wyoming 82602.

Any change in the program must be approved by the District Supervisor. "Sundry Notices and Reports on Wells" (form 9-331) must be filed for all changes of plans and other operations in accordance with 30 CFR 221.58. Emergency approval may be obtained orally, but such approval does not waive the written report requirement. Any additional construction, reconstruction, or alteration of facilities, including roads, gathering lines, batteries, etc., which will result in the disturbance of new ground will require the filing of a suitable plan pursuant to NTL-6, and prior approval by the District Supervisor.

5. Whether the well is completed as a dry hole or as a producer, "Well Completion and Recompletion Report and Log" (form 9-330) will be submitted not later than 15 days after completion of the well or after completion of operations being performed, in accordance with 30 CFR 221.59. Two copies of all logs run, core descriptions, core analyses, well-test data, geologic summaries, sample descriptions, and all other surveys or data obtained and compiled during the drilling, workover, and/or completion operations, will be filed with form 9-330. Samples (cuttings, fluid, and/or gas) will be submitted only when requested by this office.
6. Significant surface values (are) (~~are not~~) involved at this location. Accordingly, you (must) (~~need not~~) notify the Surface Management Agency at least (~~24~~) (48) hours prior to commencing field operations to allow the Surface Management Agency office to have personnel present for consultation during the construction of roads and locations.

The Surface Management Agency contact is:

Office Phone: 801-587-2201,  
City: Monticello,

Home Phone: \_\_\_\_\_

State: Utah

The Minerals Management Service office address and contacts are:

Address: 2000 Administration Building, 1745 West 1700 South, SLC, Utah 84104-3884

Office Phone: (801) 524-4590

District Supervisor E. W. Guynn

Home Phone: (801) 582-7042

District Drilling Engineer W. P. Martens

Home Phone: (801) 466-2780

District Production Engineer R.A. Henricks

Home Phone: (801) 484-2294

Staff Engineer A.M. Raffoul

Home Phone: (801) 484-2638

7. SURFACE OPERATING STANDARDS

Unless otherwise specified herein, construction and maintenance of surface facilities approved under this plan shall be in accordance with the guidelines set forth in the BLM/FS/GS Oil and Gas Brochure entitled, "Surface Operation Standards for Oil and Gas Exploration and Development." This includes but is not limited to such items as road construction and maintenance, handling of top soil and rehabilitation.

8. If a replacement rig is contemplated for completion operations, a "Sundry Notice" to that effect must be filed, for prior approval of the District Supervisor, and all conditions of this approved plan are applicable during all operations conducted with the replacement rig.
9. Pursuant to NTL-2B requirements regarding disposal facilities for new wells, this is authorization for unlined pit disposal of the water produced from this well for a period of 90 days from the date of initial production for sales purposes. During this period, an application for approval of the permanent disposal method, along with the required water analysis and other information must be submitted for the District Supervisor's approval. Failure to timely file an application within the time allowed will be considered an incident of noncompliance, and will be grounds for issuing a shut-in order until the application is submitted.
10. This permit is valid for a period of one year from the date of approval. If construction does not commence within 90 days from approval, the operator must contact the Surface Management Agency 15 days prior to beginning construction. Construction under adverse conditions may require additional stipulations. If the permit terminates, any surface disturbance created under the application must be rehabilitated in accordance with the approved plan. After termination, it is required that a new application be filed for approval for any future operations.
11. If a tank battery is constructed on this lease, it must be surrounded by a fire wall of sufficient capacity to adequately contain the storage capacity of the battery.

12. This Application for Permit to Drill is approved subject to the requirement that, should the well be successfully completed for production, this office must be notified when it is placed in a producing status. Such notification will be by telegram or other written communication, and must be received in this office by not later than the first business day next following the date on which the well is placed on production. The notification shall provide, as a minimum, the following informational items:

- a. Operator name, address and telephone number.
- b. Well name and number.
- c. Well location (1/4, 1/4, Section, Township, Range and Prime Meridian).
- d. Date well was placed in a producing status.
- e. The nature of the well's production, i.e. crude oil, or crude oil and casinghead gas, or natural gas and entrained liquid hydrocarbons.
- f. The OCS, Federal or Indian lease prefix and number on which the well is located. Otherwise, the non-Federal or non-Indian land category, i.e. State or private.
- g. If appropriate, the unit agreement name, number and participating area name.
- h. If appropriate, the communitization agreement number.

13.

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SUPPLEMENTAL STIPULATIONS OF APPROVAL ATTACHED

Shell Oil Company  
Well No. 21-19  
Section 19-T39S-R19E  
San Juan County, Utah  
Lease No. U-29967

Supplemental Stipulations:

1. Before drilling begins, the following signs will be posted on the road leading to the site:

- a. 15 mph Speed Limit
- b. Heavy Truck Traffic
- c. Dangerous Curves

2. During reclamation, all disturbed areas will be scarified with the contour to a depth of 12 inches.

3. All engines will be muffled if production results.

4. A dry hole marker will not be installed.

5. For oil and gas facilities to be "substantially unnoticeable" (criteria to be met by the 1991 date when the Secretary of the Interior makes his Wilderness Recommendations to the President), the following stipulations will have to be met:

a. All production facilities other than wellhead and transportation pipeline must be removed; this includes tank batteries, dehydrators and similar facilities.

b. The production pad must be recontoured, covered with topsoil, and have vegetation established on the entire pad. A large, flat area normally maintained for a "work-over" drill rig will not be allowed under non-impairment standards.

c. The wellhead must be painted to harmonize with the surrounding area.

d. Any pipeline right-of-way must be completely revegetated and screened to eliminate its linear nature when viewed from a nearby ground level vantage point. This would require, in most cases, revegetation with mature plants such as trees and shrubs, as well as routing the right-of-way with numerous bends.

# ADDITIONAL STIPULATIONS FOR PRODUCTION FACILITIES

Your Application for Permit to Drill also included a submittal for production facilities. These production facilities are approved for the lessee and his designated operator under Section 1 of the Oil and Gas Lease with the following conditions:

- (1) The oil and gas measurement facilities must be installed on the well location. The oil and gas meters will be calibrated in place prior to any deliveries. Tests for meter accuracy are to be conducted monthly for the first three months on new meter installations and at least quarterly thereafter. Please provide this office with a date and time for the initial meter calibration and all future meter proving schedules. A copy of the meter calibration reports are to be submitted to the Salt Lake City District Oil and Gas Supervisor. Royalty payments will be made on all production volume as determined by the meter measurements or the tank measurements. All measurement facilities must conform with the API standards for liquid hydrocarbons and the AGA standard for natural gas measurement.
- (2) Gas meter runs for each well will be located within 500 feet of the wellhead. The gas flowline will be buried from the wellhead to the meter and 500 feet downstream of the meter run or any production facilities. Meter runs must be housed and/or fenced.
- (3) All disturbed areas not required for operations will be rehabilitated.
- (4) All produced liquids must be contained including the dehydrator vent/condensate line effluent. All production pits must be fenced.
- (5) The well activity, the well status and the date the well is placed on production must be reported on Lessee's Monthly Report of Operations, Form 9-329.
- (6) All off-lease storage, off-lease measurement, or commingling on lease or off-lease must have written approval.
- (7) All product lines entering and leaving hydrocarbon storage tanks must be locked/sealed.
- (8) You are reminded of the requirements for handling, storing, or disposing of water produced from oil and gas wells under NTL-2B.
- (9) All materials, trash, junk, debris, etc. not required for production must be removed from the well site and production facility site at the completion of these operations.
- (10) A copy of the Gas Sales Contract will be provided to this office and the Royalty Accounting Department as directed.
- (11) Construction and maintenance for surface use approved under this plan should be in accordance with the surface use standards as set forth in the BLM/GS Oil and Gas Brochure entitled, "Surface Operating Standards for Oil and Gas Exploration and Development." This includes, but is not limited to, such items as road construction and maintenance, handling of top soil and rehabilitation.
- (12) "Sundry Notice and Reports on Wells" (form 9-331) will be filed for all changes of plans and other operations in accordance with 30 CFR 221.58. Emergency approval may be obtained verbally, but such approval does not waive the written report requirement. Any additional construction, reconstruction, or alternations of facilities, including roads, gathering lines, batteries, measurement facilities, etc., will require the filing of a suitable plan and prior approval by the survey.



August 4, 1982

Shell Oil Company  
P. O. Box 831  
Houston, Texas 77001

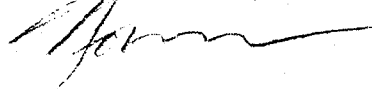
Attn: G. M. Jobe

Dear Mr. Jobe:

Our records indicate you have filed federal application for permit to drill Well No. 21-19, but have not yet filed application with the State of Utah. Applications must be approved by the State in addition to federal approval in order to commence drilling.

Please provide the necessary application for permit to drill, or otherwise advise on the status of the permit. A copy of the federal application with attachments and cover letter is acceptable.

Respectfully,



Norm Stout

NS/as

Shell Oil Company



P.O. Box 831  
Houston, Texas 77001

August 9, 1982

Mr. Ronald J. Firth  
Chief Petroleum Engineer  
State of Utah, Div of Oil, Gas & Mining  
4241 State Office Building  
Salt Lake City, UT 84114

RECEIVED  
AUG 11 1982

DIVISION OF  
OIL, GAS & MINING

Dear Mr. Firth:

SHELL-USA 21-19  
SECTION 19, T39S-R19E  
SAN JUAN COUNTY, UTAH

Enclosed is a copy of the approved federal drill permit and survey plat for the subject exploratory test. As illustrated on the plat, Shell ~~controls all acreage within a 660 foot radius of the staked location.~~ It is our understanding that this permit will serve and be accepted as approved State of Utah drill permit.

The drill site is inside a BLM Wilderness Study Area. The site was carefully selected in accordance with the desires of the BLM representative to minimize the environmental impact to the area. The location was placed in a sagebrush opening adjacent to an existing county road. Minimum impact to the area will be created by drilling at this location. A standard location would require cutting and clearing many trees and constructing an access road.

Based on the environmental concerns, we hereby request an exception to Rule C-3 (General Well Spacing Requirements) of the State of Utah Oil and Gas Conservation General Rules and Regulations for the subject location.

In addition to our August 2, 1982 letter concerning the USA 21-17, Section 17, T40S-R19E (copy enclosed), we inform you that Shell controls all acreage within a 660 foot radius of the No. 21-17 geological test. An illustrative plat is enclosed.

Should additional information or clarification be necessary, please contact me at (713) 870-3216.

Yours very truly,

A handwritten signature in dark ink, appearing to read "G. M. Jobe".

G. M. Jobe  
Administrator, Regulatory-Permits  
Rocky Mountain Division

LAM:beb

Enclosures

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
GEOLOGICAL SURVEY

OIL &amp; GAS OPERATIONS

## APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

## 1a. TYPE OF WORK

DRILL ☒DEEPEN ☐PLUG BACK ☐

## b. TYPE OF WELL

OIL  
WELL ☒GAS  
WELL ☐

OTHER

SINGLE  
ZONE ☒MULTIPLE  
ZONE ☐

## 2. NAME OF OPERATOR

Shell Oil Company

## 3. ADDRESS OF OPERATOR

P. O. Box 831, Houston, Texas 77001 Attn. G. M. Jobe Rm 5468WCK

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.)\*  
At surface

1190' FNL &amp; 2490' FWL Section 19

At proposed prod. zone

## 14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE\*

16 miles north of Mexican Hat, Utah

## 15. DISTANCE FROM PROPOSED\*

LOCATION TO NEAREST  
PROPERTY OR LEASE LINE, FT.  
(Also to nearest drlg. unit line, if any)

1190'

117'

## 18. DISTANCE FROM PROPOSED LOCATION\*

TO NEAREST WELL, DRILLING, COMPLETED,  
OR APPLIED FOR, ON THIS LEASE, FT.

N/A

## 16. NO. OF ACRES IN LEASE

2512.28

## 19. PROPOSED DEPTH

2400'

17. NO. OF ACRES ASSIGNED  
TO THIS WELL

40

## 20. ROTARY OR CABLE TOOLS

Rotary

## 21. ELEVATIONS (Show whether DF, RT, GR, etc.)

6279' GR

## 22. APPROX. DATE WORK WILL START\*

Upon permit approval

## 23. PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT

SEE 10 POINT PLAN

## ATTACHMENTS:

10 POINT PLAN - ATTACHMENT A

BOP EQUIPMENT - ATTACHMENT B

CHOKE MANIFOLD - ATTACHMENT C

SURFACE USE PLAN - ATTACHMENT D

SURVEY PLAT - ATTACHMENT E

VICINITY TOPO MAP - ATTACHMENT F

DRILL PAD LAYOUT - ATTACHMENT G

DRILL PAD CROSS SECTIONS - ATTACHMENT H

PRODUCTION FACILITIES LAYOUT - ATTACHMENT I

ARCHAEOLOGY REPORT FORWARDED TO MINERALS MANAGEMENT SERVICE & BLM UNDER  
SEPARATE COVERAPPROVED BY THE STATE  
OF UTAH DIVISION OF  
OIL, GAS, AND MINING

DATE: 8-18-82

BY: *[Signature]*OIL & GAS OPERATIONS  
RECEIVED  
JUN 18 1982  
SALT LAKE CITY, UTAH

IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM: If proposal is to deepen or plug back, give data on present productive zone and proposed new productive zone. If proposal is to drill or deepen directionally, give pertinent data on subsurface locations and measured and true vertical depths. Give blowout preventer program, if any.

24. SIGNED *E. M. Jobe* ADMINISTRATOR  
Regulatory-Permits

DATE 6/14/82

(This space for Federal or State office use)

PERMIT NO.

APPROVAL DATE

APPROVED BY *[Signature]*

FOR E. W. GUYNN

TITLE DISTRICT OIL &amp; GAS SUPERVISOR

DATE

JUL 29 1982

CONDITIONS OF APPROVAL, IF ANY:

CONDITIONS OF APPROVAL ATTACHED  
TO OPERATOR'S COPYFLARING OR VENTING OF  
GAS IS SUBJECT TO NTL 4-A  
DATED 1/1/80

NOTICE OF APPROVAL

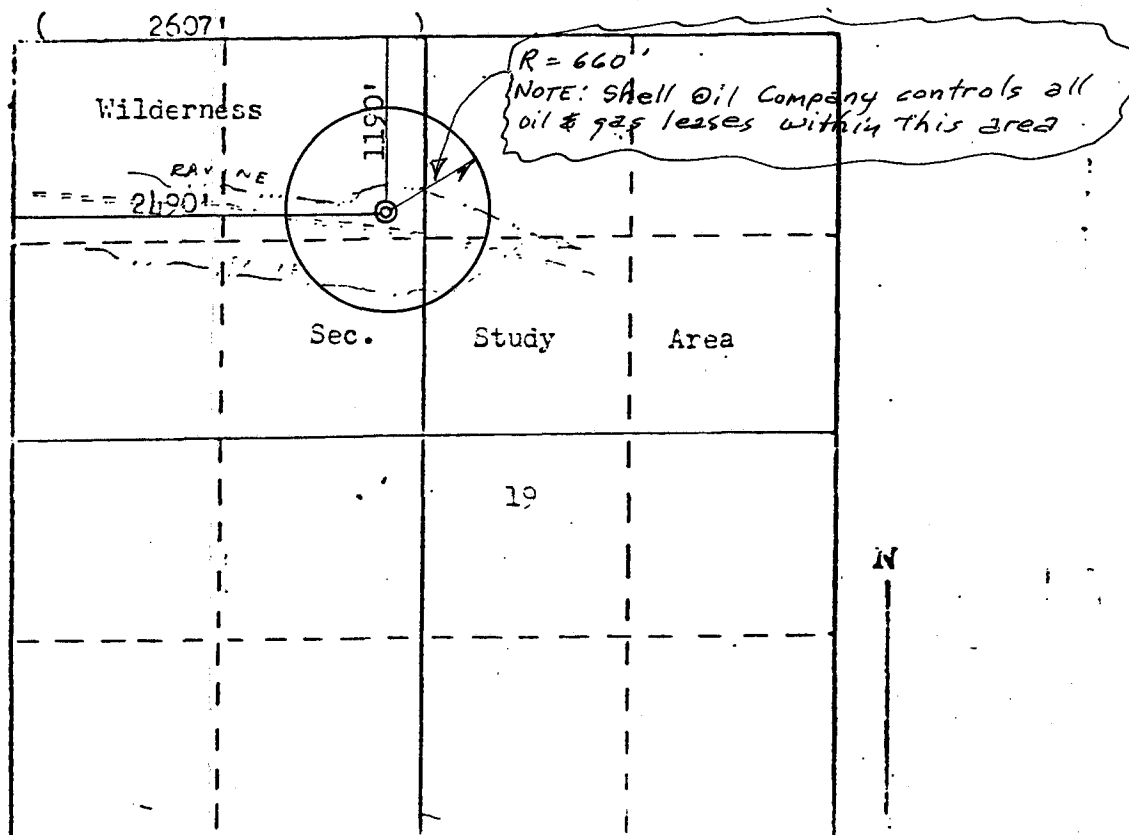
COMPANY SHELL OIL COMPANY

LEASE USA WELL NO. 21-19

SEC. 19 T. 39S R. 19E  
San Juan County, Utah

LOCATION 1190'FNL 2490'FWL

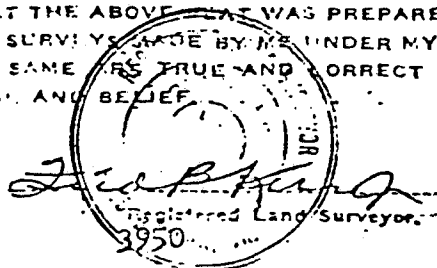
ELEVATION 6279 ungraded ground



SCALE—4 INCHES EQUALS 1 MILE

THIS IS TO CERTIFY THAT THE ABOVE MAP WAS PREPARED FROM  
FIELD NOTE OF ACTUAL SURVEYS MADE BY ME UNDER MY SUPER-  
VISION AND THAT THE SAME ARE TRUE AND CORRECT TO THE  
BEST OF MY KNOWLEDGE AND BELIEF

SEAL:



SURVEYED May 15 1982

**\*\* FILE NOTATIONS \*\***

DATE: 8-18-82

OPERATOR: Shell Oil

WELL NO: USA 21-19

Location: Sec. NE 1/4 19T. 39S R. 19E County: SAN JUAN

File Prepared: ☒

Entered on N.I.D: ☒

Card Indexed: ☒

Completion Sheet: ☒

API Number 43-037-30803

CHECKED BY:

Petroleum Engineer: \_\_\_\_\_

Director: \_\_\_\_\_

Administrative Aide: Fed lease & bond - request for topo  
C-3-c distance from Q4 sub-boundary line outlined  
in blue on left side of file.

APPROVAL LETTER:

Bond Required: Fed ok ☐

Survey Plat Required: ☐

Order No. \_\_\_\_\_

O.K. Rule C-3 ☐

Rule C-3(c), Topographic Exception - company owns or controls acreage  
within a 660' radius of proposed site ☒

Lease Designation Fed ☐

Plotted on Map ☒

Approval Letter Written ☐

Hot Line ☒

P.I. ☒

August 18, 1982

Shell Oil Company  
P. O. Box 831  
Houston, Texas 77001

Attention: Mr. G. M. Jobe

RE: Well No. USA 21-19  
NENW Sec. 19, T. 39S, R. 19E  
San Juan County, Utah

Dear Mr. Jobe:

Insofar as this office is concerned, approval to drill the above referred to oil well on said unorthodox location is hereby granted in accordance with Rule C-3(c), General Rules and Regulations and Rules of Practice and Procedure.

Should you determine that it will be necessary to plug and abandon this well, you are hereby requested to immediately notify the following:

RONALD J. FIRTH - Engineer  
Office: 533-5771  
Home: 571-6068

OR

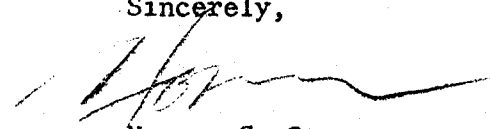
CLEON B. FEIGHT - Director  
Office: 533-5771  
Home: 466-4455

Enclosed please find Form OGC-8-X, which is to be completed whether or not water sands (aquifers) are encountered during drilling. Your cooperation in completing this form will be appreciated.

Further, it is requested that this Division be notified within 24 hours after drilling operations commence, and that the drilling contractor and rig number be identified.

The API number assigned to this well is 43-037-30803.

Sincerely,

  
Norman C. Stout  
Administrative Assistant

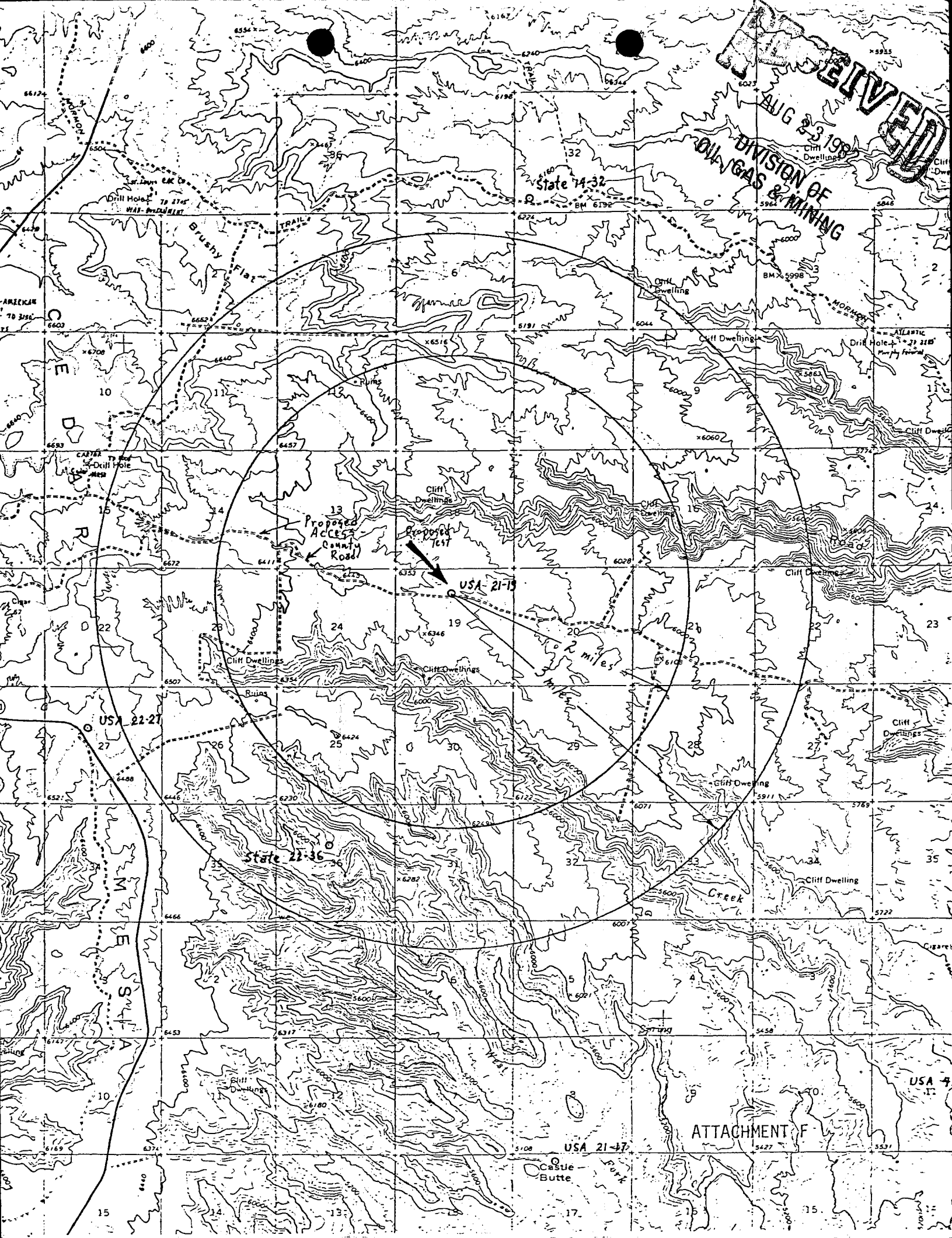
NCS/as  
cc: Minerals Management Service  
Enclosure

DIVISION OF  
OIL, GAS & MINING

596

Crim Dwellings

1919



DIVISION OF OIL, GAS AND MINING

SPUDDING INFORMATION

NAME OF COMPANY: SHELL OIL COMPANY

WELL NAME: USA 21-19

SECTION NENW 19 TOWNSHIP 39S RANGE 19E COUNTY San Juan

DRILLING CONTRACTOR Brinkerhoff Signal

RIG # 79

SPUDDED: DATE 8-23-82

TIME 2:30 PM

HOW Rotary

DRILLING WILL COMMENCE

REPORTED BY Barbara Bernard

TELEPHONE # 713-870-3218

DATE 8-24-82 SIGNED Cari F



NOTICE OF SPUD

file

Company: Shell Oil

Caller: Barbara Bernard

Phone: 713-870-3218

Well Number: USA 21-19

Location: Sec 19 T. 39S. R. 19E

County: San Juan State: Utah

Lease Number: U-29967

Lease Expiration Date: —

Unit Name (If Applicable): —

Date & Time Spudded: 2:30 PM 8/23/82

Dry Hole Spudder/Rotary: —

Details of Spud (Hole, Casing, Cement, etc.) —

Rotary Rig Name & Number: Brinkerhof #79

Approximate Date Rotary Moves In: 8/23/82

FOLLOW WITH SUNDRY NOTICE

Call Received By: Becky George

Date: 8/24/82

Well File  
State Oil & Gas ✓  
Vernal mms  
Teresa  
Diane

Shell Oil Company



P.O. Box 831

Houston, Texas 77001

August 25, 1982

Mr. Michael T. Minder, Geological Engineer  
State of Utah  
Division of Oil, Gas and Mining  
4241 State Office Building  
Salt Lake City, UT 84116

Dear Mr. Minder:

SHELL-USA 21-19  
SECTION 19, T39S-R19E  
SAN JUAN COUNTY, UTAH

As follow-up to the telephone conversation between Cari Furse of your office and Barbara Bernard of our office on August 24, 1982 whereby you were given verbal notification of the spud date of subject well, this is written notification that USA 21-19 spudded August 23, 1982.

Yours very truly,

*G. M. Jobe*

G. M. Jobe  
Administrator, Regulatory-Permits  
Rocky Mountain Division

beb

**RECEIVED**  
AUG 31 1982

**DIVISION OF  
OIL, GAS & MINING**

STATE OF UTAH  
OIL & GAS CONSERVATION COMMISSION

SUBMIT IN TRIPLICATE\*  
(Other instructions on reverse side)

SUNDRY NOTICES AND REPORTS ON WELLS

(Do not use this form for proposals to drill or to deepen or plug back to a different reservoir.  
Use "APPLICATION FOR PERMIT—" for such proposals.)

1. <input checked="" type="checkbox"/> OIL WELL <input type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER		5. LEASE DESIGNATION AND SERIAL NO. U-29967
2. NAME OF OPERATOR Shell Oil Company		6. IF INDIAN, ALLOTTEE OR TRIBE NAME
3. ADDRESS OF OPERATOR P. O. Box 831, Houston, TX 77001, ATTN G. M. Jobe, 5468 WCK		7. UNIT AGREEMENT NAME
4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.* See also space 17 below.) At surface 1190' FNL & 2490' FWL, Section 19		8. FARM OR LEASE NAME USA
14. PERMIT NO. API 43-037-30803		9. WELL NO. 21-19
15. ELEVATIONS (Show whether DF, RT, OR, etc.) 6279' GR		10. FIELD AND POOL, OR WILDCAT Wildcat
		11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA NE/4 NW/4 Section 19 T39S-R19E
		12. COUNTY OR PARISH San Juan
		13. STATE Utah

16. Check Appropriate Box To Indicate Nature of Notice, Report, or Other Data

NOTICE OF INTENTION TO:		SUBSEQUENT REPORT OF:	
TEST WATER SHUT-OFF	<input type="checkbox"/>	WATER SHUT-OFF	<input type="checkbox"/>
FRACTURE TREAT	<input type="checkbox"/>	FRACTURE TREATMENT	<input type="checkbox"/>
SHOOT OR ACIDIZE	<input type="checkbox"/>	SHOOTING OR ACIDIZING	<input type="checkbox"/>
REPAIR WELL	<input type="checkbox"/>	(Other)	<input type="checkbox"/>
(Other)	<input type="checkbox"/>		
PULL OR ALTER CASING	<input type="checkbox"/>	REPAIRING WELL	<input type="checkbox"/>
MULTIPLE COMPLETE	<input type="checkbox"/>	ALTERING CASING	<input type="checkbox"/>
ABANDON*	<input type="checkbox"/>	ABANDONMENT*	<input type="checkbox"/>
CHANGE PLANS	<input type="checkbox"/>		

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)\*

Monthly Well Status Report

Spud at 2:30 PM, 8-23-82. Set 8-5/8" casing at 774'. Cemented w/270 sx Class "H" cement. Drilling at 2149 feet.

18. I hereby certify that the foregoing is true and correct

SIGNED <u>S. M. Jobe</u>	TITLE <u>Administrator</u>	DATE <u>8-31-82</u>
(This space for Federal or State office use)		
APPROVED BY _____	TITLE _____	DATE _____
CONDITIONS OF APPROVAL, IF ANY:		

STATE OF UTAH  
OIL & GAS CONSERVATION COMMISSION

SUBMIT IN TRIPLICATE\*  
(Other instructions on reverse side)

SUNDRY NOTICES AND REPORTS ON WELLS

(Do not use this form for proposals to drill or to deepen or plug back to a different reservoir.  
Use "APPLICATION FOR PERMIT—" for such proposals.)

1. <input type="checkbox"/> OIL WELL <input type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER Dry Hole		5. LEASE DESIGNATION AND SERIAL NO. U-29967
2. NAME OF OPERATOR Shell Oil Company		6. IF INDIAN, ALLOTTEE OR TRIBE NAME
3. ADDRESS OF OPERATOR P. O. Box 831, Attn G. M. Jobe 5468 WCK, Houston, TX 77001		7. UNIT AGREEMENT NAME
4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.* See also space 17 below.) At surface 1190' FNL & 2490' FWL, Section 19		8. FARM OR LEASE NAME USA
14. PERMIT NO.	15. ELEVATIONS (Show whether DF, RT, OR, etc.) 6279' GR	9. WELL NO. 21-19
		10. FIELD AND POOL, OR WILDCAT Wildcat
		11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA NE/4 NW/4 Section 19 T39S-R19F
		12. COUNTY OR PARISH San Juan
		13. STATE Utah

16. Check Appropriate Box To Indicate Nature of Notice, Report, or Other Data

NOTICE OF INTENTION TO:		SUBSEQUENT REPORT OF:	
TEST WATER SHUT-OFF	<input type="checkbox"/>	WATER SHUT-OFF	<input type="checkbox"/>
FRACTURE TREAT	<input type="checkbox"/>	FRACTURE TREATMENT	<input type="checkbox"/>
SHOOT OR ACIDIZE	<input type="checkbox"/>	SHOOTING OR ACIDIZING	<input type="checkbox"/>
REPAIR WELL	<input type="checkbox"/>	(Other)	<input type="checkbox"/>
(Other)	<input type="checkbox"/>		
FULL OR ALTER CASING	<input type="checkbox"/>	REPAIRING WELL	<input type="checkbox"/>
MULTIPLE COMPLETE	<input type="checkbox"/>	ALTERING CASING	<input type="checkbox"/>
ABANDON*	<input type="checkbox"/>	ABANDONMENT*	<input checked="" type="checkbox"/>
CHANGE PLANS	<input type="checkbox"/>		

(NOTE: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.) \*

Verbal approval given to P&A

Set plugs as follows on 9-4-82 as per attached prognosis:

Plug #1	2058'-2258'	70 sx Class "H"
Plug #2	674'-874'	80 sx Class "H"
Surface		10 sx

Released rig @ 4:00 PM 9-4-82.

18. I hereby certify that the foregoing is true and correct

SIGNED <u>S. M. Jobe</u>	TITLE <u>Administrator</u> <u>Regulatory Permits</u>	DATE <u>September 7, 1982</u>
(This space for Federal or State office use)		
APPROVED BY _____	TITLE _____	DATE _____
CONDITIONS OF APPROVAL, IF ANY:		

Plug and Abandonment Procedures

Shell Fed 21-19

WSA

8 5/8" 24# @ 774' - Surface

Cement to surface ,

7 7/8" Hole to 2361

- (1) Trip in the hole open ended with drill pipe
- (2) Circulate mud, bottoms up.
- (3) Set the following plugs with Class "H" cement 2 1/2-3 hours estimated pumpability. Use balanced plug method. Pump 10 bbs of a fresh water preflush, and adequate fresh water behind to balance the plug.

± 2155' - Desert Creek - <sup>200'</sup>~~180'~~ of fill up across the formation 50 sack minimum based on 7 7/8" Hole verify formation top with logs. Base of the plug at 2245±' and the top of the plug at 2065±'.

774' casing shoe - 200+ of fill up 70 sack minimum 1/2 in and 1/2 out of the surface casing

Surface 10 sack plug

- (4) Use caliper log to estimate hole size
- (5) Cut surface casing at least four feet below ground level. Weld on plate with well name and operator as marker.
- (6) Inform state of Utah Natural Resources & Energy. Oil, Gas & Mining

Phone Numbers:

Ronald J. Firth - Engineer

Office: 801-533-5771

Home: 801-571-6068

Cleon B. Feight - Director

Office: 801-533-5771

Home: 801-466-4455

*Also need to contact mms. for concurrence of P&A procedures.*

Recommended: K. Wilcken

K.S.

Approved: J. D. D. Agostino.

STATE OF UTAH

SUBMIT IN DUPLICATE\*

(See other instructions on reverse side)

## OIL &amp; GAS CONSERVATION COMMISSION

## WELL COMPLETION OR RECOMPLETION REPORT AND LOG \*

1a. TYPE OF WELL:				OIL WELL <input type="checkbox"/>		GAS WELL <input type="checkbox"/>		DRY <input checked="" type="checkbox"/> Other	
b. TYPE OF COMPLETION:				NEW WELL <input type="checkbox"/>		WORK OVER <input type="checkbox"/>		DEEP-EN <input type="checkbox"/>	
				PLUG BACK <input type="checkbox"/>		DIFF. RESVR. <input type="checkbox"/>		Other	
2. NAME OF OPERATOR Shell Oil Company									
3. ADDRESS OF OPERATOR P. O. Box 831, Attn G. M. Jobe, 5468 WCK, Houston, TX 77001									
4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements) At surface 1190' FNL & 2490' FWL, Section 19 At top prod. interval reported below At total depth									
14. PERMIT NO.				DATE ISSUED					
15. DATE SPUDDED				16. DATE T.D. REACHED		17. DATE COMPL. (Ready to prod.)		18. ELEVATIONS (DF, RKB, RT, GR, ETC.)*	
08-23-82				9-1-82		P&A		6279 GR	
20. TOTAL DEPTH, MD & TVD				21. PLUG, BACK T.D., MD & TVD		22. IF MULTIPLE COMPL., HOW MANY*		23. INTERVALS DRILLED BY	
								ROTARY TOOLS	
								CABLE TOOLS	
24. PRODUCING INTERVAL(S), OF THIS COMPLETION—TOP, BOTTOM, NAME (MD AND TVD)*									25. WAS DIRECTIONAL SURVEY MADE
26. TYPE ELECTRIC AND OTHER LOGS RUN DIL/Sonic/SP/GR/CA/EDC/CNL/DLL/MESL (Sample)									27. WAS WELL CORED yes
28. CASING RECORD (Report all strings set in well)									
CASINO SIZE		WEIGHT, LB./FT.		DEPTH SET (MD)		HOLE SIZE		CEMENTING RECORD	
16"				40'					
8-5/8"				774'				270 sx Class "H"	
29. LINER RECORD									
SIZE		TOP (MD)		BOTTOM (MD)		SACKS CEMENT*		SCREEN (MD)	
30. TUBING RECORD									
SIZE		DEPTH SET (MD)		PACKER SET (MD)					
31. PERFORATION RECORD (Interval, size and number)									
NA									
32. ACID, SHOT, FRACTURE, CEMENT SQUEEZE, ETC.									
DEPTH INTERVAL (MD)					AMOUNT AND KIND OF MATERIAL USED				
NA									
33.* PRODUCTION									
DATE FIRST PRODUCTION			PRODUCTION METHOD (Flowing, gas lift, pumping—size and type of pump)					WELL STATUS (Producing or shut-in)	
P&A									
DATE OF TEST		HOURS TESTED		CHOKE SIZE		PROD'N. FOR TEST PERIOD		OIL—BBL.	
								GAS—MCF.	
								WATER—BBL.	
								GAS-OIL RATIO	
FLOW, TUBING PRESS.		CASING PRESSURE		CALCULATED 24-HOUR RATE		OIL—BBL.		GAS—MCF.	
								WATER—BBL.	
								OIL GRAVITY-API (CORR.)	
34. DISPOSITION OF GAS (Sold, used for fuel, vented, etc.)									TEST WITNESSED BY
35. LIST OF ATTACHMENTS									
See attached drilling history									
36. I hereby certify that the foregoing and attached information is complete and correct as determined from all available records									
SIGNED B. M. Jobe			ADMINISTRATOR,				TITLE Regulatory-Permits		
							DATE September 7, 1982		

\*(See Instructions and Spaces for Additional Data on Reverse Side)

# INSTRUCTIONS

**General:** This form is designed for submitting a complete and correct well completion report and log on all types of lands and leases to either a Federal agency or a State agency, or both, pursuant to applicable Federal and/or State laws and regulations. Any necessary special instructions concerning the use of this form and the number of copies to be submitted, particularly with regard to local, area, or regional procedures and practices, either are shown below or will be issued by, or may be obtained from, the local Federal and/or State office. See instructions on items 22 and 24, and 38, below regarding separate reports for separate completions.

If not filed prior to the time this summary record is submitted, copies of all currently available logs (drillers, geologists, sample and core analysis, all types electric, etc.), formation and pressure tests, and directional surveys, should be attached hereto, to the extent required by applicable Federal and/or State laws and regulations. All attachments should be listed on this form, see item 35.

**Item 4:** If there are no applicable State requirements, locations on Federal or Indian land should be described in accordance with Federal requirements. Consult local State or Federal office for specific instructions.

**Item 18:** Indicate which elevation is used as reference (where not otherwise shown) for depth measurements given in other spaces on this form and in any attachments.

**Items 22 and 24:** If this well is completed for separate production from more than one interval zone (multiple completion), so state in item 22, and in item 24 show the producing interval, or intervals, top(s), bottom(s) and name(s) (if any) for only the interval reported in item 33. Submit a separate report (page) on this form, adequately identified, for each additional interval to be separately produced, showing the additional data pertinent to such interval.

**Item 29:** "Sacks Cement": Attached supplemental records for this well should show the details of any multiple stage cementing and the location of the cementing tool.

**Item 33:** Submit a separate completion report on this form for each interval to be separately produced. (See instruction for items 22 and 24 above.)

## 37. SUMMARY OF POROUS ZONES:

SHOW ALL IMPORTANT ZONES OF POROSITY AND CONTENTS THEREOF; CORED INTERVALS; AND ALL DRILL-STEM TESTS, INCLUDING DEPTH INTERVAL TESTED, CUSHION USED, TIME TOOL OPEN, FLOWING AND SHUT-IN PRESSURES, AND RECOVERIES

FORMATION	TOP	BOTTOM	DESCRIPTION, CONTENTS, ETC.	38. GEOLOGIC MARKERS		
				NAME	MEAS. DEPTH	TRUE VERT. DEPTH
			Core #1 2131 - 2149' Rec 28' Ismay Core #2 2165 - 2184' Rec 9' Desert Creek	Cedar Mesa Upper Hermosa P-50 Shale Desert Cercek P-40 Shale Pre-Desert Crk Total Depth	Surface 1116 2140 2158 2306 2321 2361	
			DST #1 2132' - 2361' Recovered drilling mud			

Shell-USA 21-19  
(WC) Brk Signal #79  
2430' Desert Creek Test  
\$ 23M/\$220M  
WI - 60%  
GR 6279'  
16" csg @ 40'

8-23-82  
Status: RURT.  
95% moved; 50% rigged up.

UTAH

MONUMENT UPLIFT

Shell-USA 21-19  
(WC) Brk Signal #79  
2430' Desert Creek Test  
\$ 34M/\$220M  
WI - 60%  
GR 6279'  
16" csg @ 40'

100/45//1/7-1/2. Status: Drilling.

Mud: (.447) 8.6 x 29

Spud at 2:30 PM, 8-23-82

Location: 1190' FNL & 2490' FWL

Section 19, T39S-R19E

San Juan County, Utah

AUG 24 1982

UTAH

MONUMENT UPLIFT

Shell-USA 21-19  
(WC) Brk Signal #79  
2430' Desert Creek Test  
\$ 44M/\$220M  
WI - 60%  
GR 6279'  
16" csg @ 40'

300/200//2/7-1/2. Status: Drilling.

Dev: 1/2" at 250'

AUG 25 1982

UTAH

MONUMENT UPLIFT

Shell-USA 21-19  
(WC) Brk Signal #79  
2430' Desert Creek Test  
\$ 58M/\$220M  
WI - 60%  
GR 6279'  
16" csg @ 40'

771/471//3/7-1/2. Status: Drilling.

Dev: 1" at 464'

AUG 26 1982

UTAH

MONUMENT UPLIFT

Shell-USA 21-19  
(WC) Brk Signal #79  
2430' Desert Creek Test  
\$ 91M/\$220M  
WI - 60%  
GR 6279'  
16" csg @ 40'  
8-5/8" csg @ 774'

775/4//4/7-1/2. Status: Nipple up.

Ran 20 jts 8-5/8" csg to 774'. Cmt

w/270 sx Class "H" w/2% CaCl2, 1/4#/sx

Flocele. Did not get cmt to surface.

Did 1" job w/50 sx Class "H" w/2% CaCl2,

1/4#/sx Flocele.

AUG 27 1982



UTAHMONUMENT UPLIFT

Shell-USA 21-19  
(WC) Brk Signal #79  
2430' Desert Creek Test  
\$126M/\$220M  
WI - 60%  
GR 6279'  
16" csg @ 40'  
8-5/8" csg @ 774'

8-28-82

1121/346//5/7. Status: Drilling.

Dev: 1 1/2" at 775'

Mud: 8.6 x 37

8-29-82

1661/540//6/7. Status: Drilling.

Dev: 1" at 1285'

Mud: 9 x 34

8-30-82

2088/427//7/7. Status: Circ. samples.

Dev: 1" at 1817'

Mud: (.473) 9.1 x 32 x 11

UTAHMONUMENT UPLIFT

Shell-USA 21-19  
(WC) Brk Signal #79  
2430' Desert Creek Test  
\$138M/\$220M  
WI - 60%  
GR 6279'  
16" csg @ 40'  
8-5/8" csg @ 774'

2149/61//8/7. Status: Building volume.

Core #1 - 2121 to 2149' - cut 28', rec. 28'.

Lost approx. 200 bbls mud - losing mud at  
report time. Dev: 1-1/2" at 2121'.

Mud: (.473) 9.1 x 33 x 9

AUG 31 1982

UTAHMONUMENT UPLIFT

Shell-USA 21-19  
(WC) Brk Signal #79  
2430' Desert Creek Test  
\$149M/\$220M  
WI - 60%  
GR 6279'  
16" csg @ 40'  
8-5/8" csg @ 774'

2233/84//9/7. Status: Drilling.

Core #2 2165-2184'. Cut 19', rec. 10'.

Mud: (.452) 8.7 x 34 x 8

SEP 1 1982

UTAHMONUMENT UPLIFT

Shell-USA 21-19  
(WC) Brk Signal #79  
2430' Desert Creek Test  
\$169M/\$220M  
WI - 60%  
GR 6279'  
16" csg @ 40'  
8-5/8" csg @ 774'

2354/121//10/7. Status: Logging.

Ran DIL/Sonic/SP/GR/CAL; FDC/CNL; DLL/MFSL.

Dev: 1" at 2354'

Mud: (.461) 8.8 x 36 x 9

SEP 1 1982

UTAHMONUMENT UPLIFT

Shell-USA 21-19  
(WC) Brk Signal #79  
2430' Desert Creek Test  
\$213M/\$220M  
WI - 60%  
GR 6279'  
16" csg @ 40'  
8-5/8" csg @ 774'

Corrected 2361/0//7.5/11. Status: RIH w/DST Tool.

Ran sidewall sample gun & RFT tool. Circ & cond  
mud. Make up DST tool & RIH.

Mud: (.452) 8.7 x 35 x 8.6

SEP 3 1982

UTAH

MONUMENT UPLIFT

Shell-USA 21-19

(WC) Brk Signal #79

2430' Desert Creek Test

\$ M/\$220M

WI - 60%

GR 6279'

16" csg @ 40'

8-5/8" csg @ 774'

9-4-82

2361/0//12/7.5. Status: Circ for Plugs.

Ran DST.

Mud: (.452) 8.7 x 35 x 8.6

P&A 2361/0//13/7.5. Status: Rig released.

Set plugs as follows: Plug #1, 2058' to 2258',

70 sx Class "H", Plug #2, 674' to 874', 80 sx

Class "H". Set 10 sx plug at surface.

Release rig @ 4:00 PM, 9-4-82.

Cost: \$241,466

CORE ANALYSIS RESULTS

for

SHELL OIL COMPANY

SHELL FEDERAL SUN 21-19 WELL  
MONUMENT UPLIFT FIELD  
SAN JUAN COUNTY, UTAH

**RECEIVED**

SEP 27 1982

DIVISION OF  
OIL, GAS & MINING

**CORE LABORATORIES, INC.**  
*Petroleum Reservoir Engineering*  
 DALLAS, TEXAS

PAGE NO. 1

SHELL OIL COMPANY  
 SHELL FED. SUN 21-19  
 MONUMENT UPLIFT  
 SAN JUAN COUNTY

FORMATION : DESERT CREEK  
 DRLO. FLUID: WBM  
 LOCATION : NE, NW SEC. 19-39S-19E  
 STATE : UTAH

DATE : 8-31-82  
 FILE NO. : RP-3-3228  
 ANALYSTS : GG/DS  
 ELEVATION: 6260 GL

CONVENTIONAL CORE ANALYSIS

SAMP. NO.	DEPTH	PERM. TO HORZ.	AIR (MD) VERTICAL	POR. FLD.	FLUID OIL	SATS. WATER	GR. DNS.	DESCRIPTION
1	2121-22	0.01		11.7	0.0	88.8	2.75	DOL BRN VEXLN/RTHY LM STY
2	2122-23	0.11		14.0	0.0	86.7		DOL BRN VEXLN/RTHY
3	2123-24	0.17		11.7	0.0	90.9		DOL BRN VEXLN/RTHY
4	2124-25	0.08		14.4	0.0	83.9	2.88	DOL BRN VEXLN/RTHY LM
5	2125-26	<0.01		2.2	0.0	76.8		LM GRV VEXLN FOSS VSL/VUG
6	2126-27	0.01		4.4	12.2	73.1		LM GRV VEXLN FOSS VSL/VUG
7	2127-28	<0.01		2.0	21.1	66.3	2.69	LM GRV VEXLN FOSS VSL/VUG
8	2128-29	<0.01		2.6	0.0	81.4		LM GRV VEXLN FOSS VSL/VUG
9	2129-30	<0.01		2.7	0.0	85.8		LM GRV VEXLN FOSS VSL/VUG
10	2130-31	<0.01		1.1	0.0	47.2	2.75	LM GRV VEXLN FOSS VSL/VUG STY
11	2131-32	0.08		12.3	7.4	87.4		DOL BRN VEXLN LM
12	2132-33	0.03		10.6	0.0	89.5		DOL BRN VEXLN LM
13	2133-34	<0.01		2.6	0.0	52.0	2.70	LM GRV VEXLN
14	2134-35	<0.01		1.1	9.7	38.7		LM GRV VEXLN
15	2135-36	<0.01		2.4	8.9	80.5		LM DKGRV VEXLN SL/SHL
16	2136-37	<0.01		0.9	7.6	75.7	2.73	LM DKGRV VEXLN SL/SHL
17	2137-38	<0.01		2.8	45.9	45.9		LM DKGRV VEXLN SL/SHL
18	2138-39	<0.01		1.6	60.5	26.9		SHL BLK VEGRN LM
19	2139-40	<0.01		0.8	59.8	29.9	2.66	SHL BLK VEGRN LM
20	2140-41	<0.01		2.3	54.7	36.4		SHL BLK VEGRN LM
21	2141-42	<0.01		2.7	46.1	46.1		SHL BLK VEGRN LM
22	2142-43	<0.01		0.7	48.9	40.8	2.64	SHL BLK VEGRN LM
23	2143-44	<0.01		1.7	74.0	12.3		SHL BLK VEGRN LM
24	2144-45	<0.01		2.3	62.9	27.0		SHL BLK VEGRN LM
25	2145-46	<0.01		0.7	75.3	12.6	2.64	SHL BLK VEGRN LM

These analyses, opinions or interpretations are based on observations and materials supplied by the client to whom, and for whose exclusive and confidential use, this report is made. The interpretations or opinions expressed represent the best judgment of Core Laboratories, Inc. (all errors and omissions excepted); but Core Laboratories, Inc. and its officers and employees, assume no responsibility and make no warranty or representations, as to the productivity, proper operations, or profitability of any oil, gas or other mineral well or sand in connection with which such report is used or relied upon.

**CORE LABORATORIES, INC.**  
*Petroleum Reservoir Engineering*  
 DALLAS, TEXAS

PAGE NO. 2

SHELL OIL COMPANY  
 SHELL FED. SUN 21-19  
 MONUMENT UPLIFT  
 SAN JUAN COUNTY

FORMATION : DESERT CREEK  
 DRLG. FLUID: WBM  
 LOCATION : NE, NW SEC. 19-39S-19E  
 STATE : UTAH

DATE : 8-31-82  
 FILE NO. : RP-3-3228  
 ANALYSTS : GGIDS  
 ELEVATION: 6260 GL

CONVENTIONAL CORE ANALYSIS

SAMP. NO.	DEPTH	PERM. TO HORZ.	AIR (MD) VERTICAL	POR. FLD.	FLUID OIL	SATS. WATER	GR. DNS.	DESCRIPTION
26	2146-47	<0.01		3.2	39.8	53.1		SHL BLK VFGRN LM
27	2147-48	<0.01		1.4	67.8	15.1		SHL BLK VFGRN
28	2148-49	<0.01		0.6	57.9	33.1	2.64	SHL BLK VFGRN
	2149-2165							DRILLED
29	2165-66	<0.01		3.9	0.0	79.2		LM GRY VFXLN
30	2166-67	<0.01		0.9	0.0	48.6		LM GRY VFXLN
31	2167-68	<0.01		0.8	0.0	22.5	2.71	LM GRY VFXLN STY
32	2168-69	<0.01		0.6	0.0	33.2		LM GRY VFXLN
33	2169-70	<0.01		1.0	0.0	21.6		LM GRY VFXLN STY
34	2170-71	<0.01		7.2	14.0	72.1	2.71	LM GRY VFXLN VSL/VUG STY
35	2171-72	<0.01		6.1	11.8	60.7		LM GRY VFXLN VSL/VUG STY
36	2172-73	0.01		6.8	1.5	84.3		LM BRN VFXLN VSL/VUG
37	2173-74	0.03		9.0	0.9	82.7	2.70	LM BRN VFXLN VSL/VUG
	2174-2184							CORE LOSS

Boyle's Law Helium Porosity run on samples with grain density.

These analyses, opinions or interpretations are based on observations and materials supplied by the client to whom, and for whose exclusive and confidential use, this report is made. The interpretations or opinions expressed represent the best judgment of Core Laboratories, Inc. (all errors and omissions excepted); but Core Laboratories, Inc. and its officers and employees, assume no responsibility and make no warranty or representations, as to the productivity, proper operations, or profitability of any oil, gas or other mineral well or sand in connection with which such report is used or relied upon.

CORE LABORATORIES, INC.  
Petroleum Reservoir Engineering  
DALLAS, TEXAS

JOB NO.	29-3-3228
FORMATION	DESERT CREEK
DEPTH INTERVAL	2121 2149
INTERVAL THICKNESS (FEET)	28
FEET INCLUDED IN AVERAGE	28
TOTAL PERMEABILITY	0.70
AVERAGE PERM ARITHMETIC	0.03
AVERAGE PERMEABILITY GEOMETRIC	0.01
TOTAL POROSITY	117.5
AVERAGE POROSITY	4.2
AVERAGE B/A-E	325.6
TOTAL OIL SATURATION	760.6
OIL SATURATION ARITHMETIC AVER.	27.2
OIL SATURATION POR. AVER.	11.6
TOTAL WATER SATURATION	1583.9
WATER SAT. ARITHMETIC AVERAGE	56.6
WATER SAT. POR. AVER.	75.2

JOB NO.	29-3-3228
FORMATION	DESERT CREEK
DEPTH INTERVAL	2165 2174
INTERVAL THICKNESS (FEET)	9
FEET INCLUDED IN AVERAGE	9
TOTAL PERMEABILITY	0.11
AVERAGE PERM ARITHMETIC	0.01
AVERAGE PERMEABILITY GEOMETRIC	0.01
TOTAL POROSITY	36.3
AVERAGE POROSITY	4.0
AVERAGE B/A-E	312.9
TOTAL OIL SATURATION	28.2
OIL SATURATION ARITHMETIC AVER.	3.1
OIL SATURATION POR. AVER.	5.3
TOTAL WATER SATURATION	504.9
WATER SAT. ARITHMETIC AVERAGE	56.1
WATER SAT. POR. AVER.	72.1

2121 - 2149 Non-productive due to low permeability  
2165 - 2174 Non-productive due to low permeability

CORE LABORATORIES, INC.



Petroleum Reservoir Engineering

COMPANY SHELL OIL COMPANY FIELD MONUMENT UPLIFT FILE RP-3-3228  
WELL SHELL FED SUN 21-19 COUNTY SAN JUAN DATE 9-1-82  
LOCATION NE,NW SEC.19-39S-19E STATE UTAH ELEV. 6260 GL

## CORE-GAMMA CORRELATION

These analyses, opinions or interpretations are based on observations and material supplied by the client to whom, and for whose exclusive and confidential use, this report is made. The interpretations or opinions expressed represent the best judgment of Core Laboratories, Inc. (all errors and omissions excepted), but Core Laboratories, Inc. and its officers and employees, assume no responsibility and make no warranty or representation as to the productivity, operation, or profitability of any oil, gas or other mineral well or sand in connection with which such report is used or relied upon.

VERTICAL SCALE: 5" = 100'

### CORE-GAMMA SURFACE LOG

(PATENT APPLIED FOR)

GAMMA RAY

RADIATION INCREASE →

### COREGRAPH

TOTAL WATER

PERCENT TOTAL WATER

80 60 40 20 0

DESERT CREEK FORMATION

PERMEABILITY

MILLIDARCYs

100 50 10 5 1

POROSITY

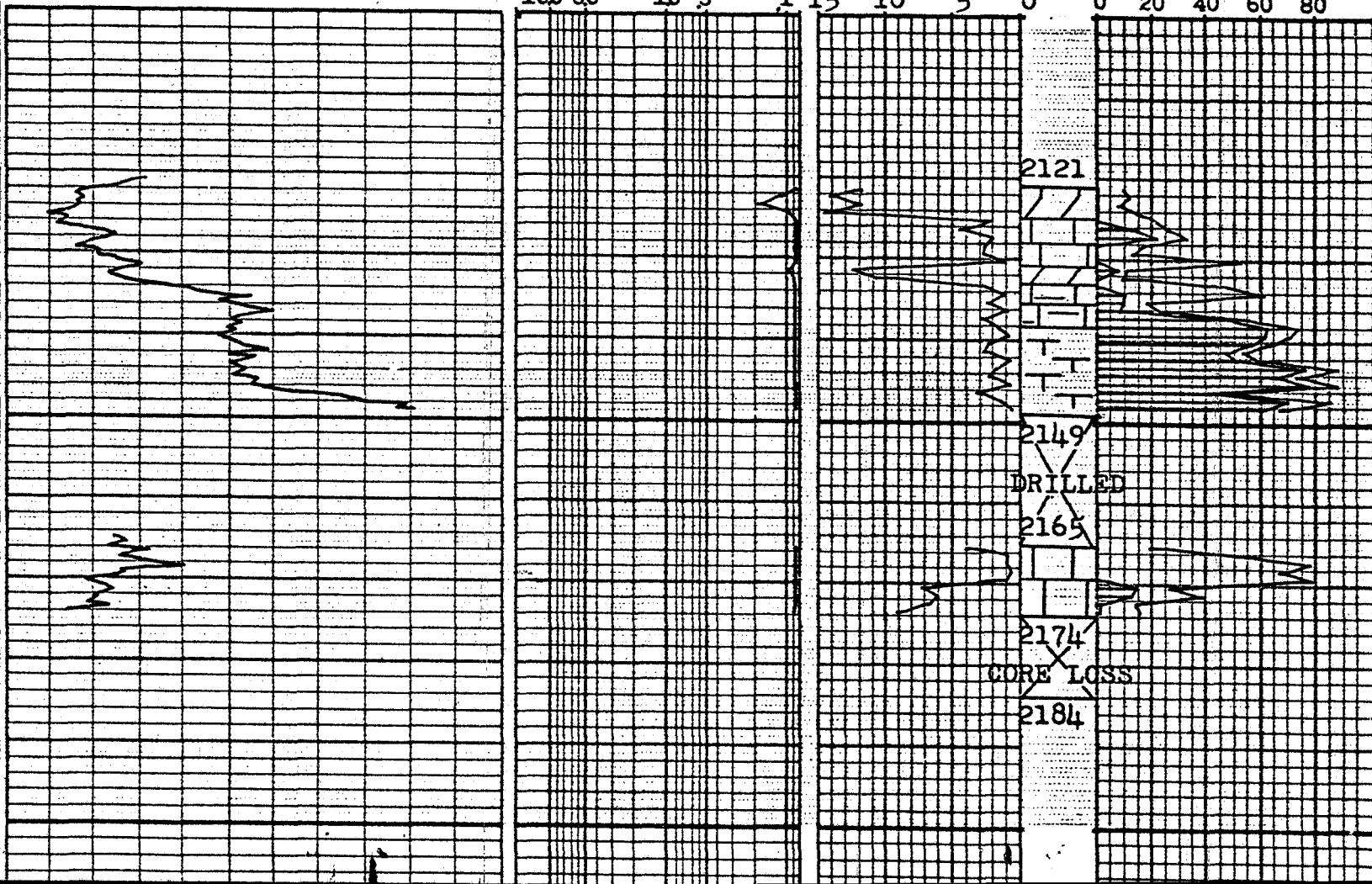
PERCENT

15 10 5 0

OIL SATURATION

PERCENT PORE SPACE

0 20 40 60 80



SHELL OIL COMPANY  
LEASE OWNER/COMPANY NAME

LEASE NAME

21-19  
WELL NO

1  
TEST NO

32.1 - 2361.  
TESTED INTERVAL

SHELL OIL COMPANY  
LEASE OWNER/COMPANY NAME

LEGAL LOCATION  
SEC. - TWP. - RNG

395-196-19 N ENW

FIELD  
AREA

MONUMENT UPLIFT

COUNTY

SAN JUAN

STATE

UTAH BC-DR

DIVISION OF  
OIL, GAS & MINING

SEP 27 1982

RECEIVED



TICKET NO. 21284500

13-SEP-82

FARMINGTON

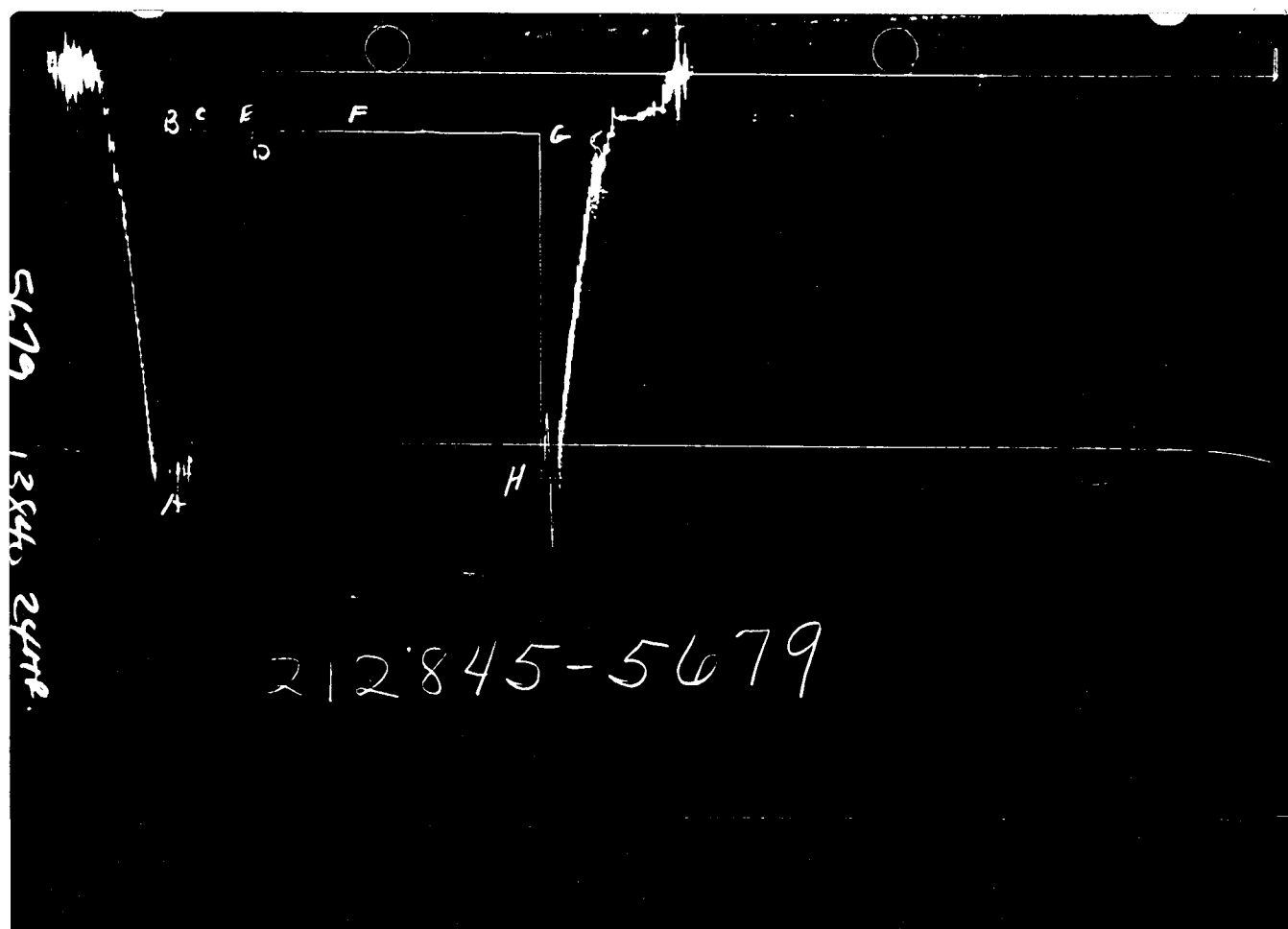
# FORMATION TESTING SERVICE REPORT



212845-5678

GAUGE NO: 5678 DEPTH: 2110.5 BLANKED OFF: NO HOUR OF CLOCK: 24

ID	DESCRIPTION	PRESSURE		TIME		TYPE
		REPORTED	CALCULATED	REPORTED	CALCULATED	
A	INITIAL HYDROSTATIC	972.2				
B	INITIAL FIRST FLOW	39.1				
C	FINAL FIRST FLOW	41.7		12.0	12.0	F
C	INITIAL FIRST CLOSED-IN	41.7				
D	FINAL FIRST CLOSED-IN	64.7		61.0	60.8	C
E	INITIAL SECOND FLOW	43.4				
F	FINAL SECOND FLOW	43.4		120.0	120.3	F
F	INITIAL SECOND CLOSED-IN	43.4				
G	FINAL SECOND CLOSED-IN	46.6		230.0	216.2	C
H	FINAL HYDROSTATIC	953.3				



GAUGE NO: 5679 DEPTH: 2356.0 BLANKED OFF: YES HOUR OF CLOCK: 24

ID	DESCRIPTION	PRESSURE		TIME		TYPE
		REPORTED	CALCULATED	REPORTED	CALCULATED	
A	INITIAL HYDROSTATIC		1082.1			
B	INITIAL FIRST FLOW		150.3			
C	FINAL FIRST FLOW		154.6	12.0	12.0	F
C	INITIAL FIRST CLOSED-IN		154.6			
D	FINAL FIRST CLOSED-IN		178.6	61.0	60.8	C
E	INITIAL SECOND FLOW		155.7			
F	FINAL SECOND FLOW		157.8	120.0	120.3	F
F	INITIAL SECOND CLOSED-IN		157.8			
G	FINAL SECOND CLOSED-IN		161.0	230.0	216.2	C
H	FINAL HYDROSTATIC		1065.2			

## EQUIPMENT & HOLE DATA

FORMATION TESTED: DESERT CREEK  
 NET PAY (ft): \_\_\_\_\_  
 GROSS TESTED FOOTAGE: 229.0  
 ALL DEPTHS MEASURED FROM: SEE REMARKS  
 CASING PERFS. (ft): \_\_\_\_\_  
 HOLE OR CASING SIZE (in): 7.875  
 ELEVATION (ft): 6277  
 TOTAL DEPTH (ft): 2361.0  
 PACKER DEPTH(S) (ft): 2126, 2132  
 FINAL SURFACE CHOKE (in): \_\_\_\_\_  
 BOTTOM HOLE CHOKE (in): 0.750  
 MUD WEIGHT (lb/gal): 8.70  
 MUD VISCOSITY (sec): 36  
 ESTIMATED HOLE TEMP. (°F): \_\_\_\_\_  
 ACTUAL HOLE TEMP. (°F): 82 @ 2356.0 ft

TICKET NUMBER: 21284500

DATE: 9-3-82 TEST NO: 1

TYPE DST: OPEN HOLE

HALLIBURTON CAMP:  
FARMINGTON

TESTER: DELL GUNN

WITNESS: \_\_\_\_\_

DRILLING CONTRACTOR:  
BRINKERHOFF #79

## FLUID PROPERTIES FOR RECOVERED MUD & WATER

SOURCE	RESISTIVITY	CHLORIDES
<u>SAMPLER</u>	<u>4.800 @ 84 °F</u>	<u>560 ppm</u>
_____	_____ °F	_____ ppm
_____	_____ °F	_____ ppm
_____	_____ °F	_____ ppm
_____	_____ °F	_____ ppm
_____	_____ °F	_____ ppm

## SAMPLER DATA

Psig AT SURFACE: 32  
 cu.ft. OF GAS: 0.00  
 cc OF OIL: 0  
 cc OF WATER: 0  
 cc OF MUD: 650  
 TOTAL LIQUID cc: 650

## HYDROCARBON PROPERTIES

OIL GRAVITY (°API): \_\_\_\_\_ @ \_\_\_\_\_ °F  
 GAS/OIL RATIO (cu.ft. per bbl): \_\_\_\_\_  
 GAS GRAVITY: \_\_\_\_\_

## CUSHION DATA

TYPE	AMOUNT	WEIGHT
_____	_____	_____
_____	_____	_____

## RECOVERED:

DROPPED BAR AND RECOVERED ONLY DRILLING FLUID.

MEASURED FROM  
TESTER VALVE

## REMARKS:

DEPTHS MEASURED FROM KELLY BUSHING ABOVE GROUND LEVEL.



TICKET NO: 21284500  
CLOCK NO: 14128 HOUR: 24



GAUGE NO: 5678  
DEPTH: 2110.5

REF	MINUTES	PRESSURE	AP	$\frac{t \times \Delta t}{t + \Delta t}$	$\log \frac{t + \Delta t}{\Delta t}$
FIRST FLOW					
B 1	0.0	39.1			
2	2.0	38.8	-0.3		
3	4.0	39.4	0.7		
4	6.0	40.1	0.6		
5	8.0	40.5	0.4		
6	10.0	40.9	0.4		
C 7	12.0	41.7	0.8		
FIRST CLOSED-IN					
C 1	0.0	41.7			
2	4.0	45.9	4.2	3.0	0.598
3	8.0	46.9	5.2	4.8	0.397
4	12.0	49.2	7.5	6.0	0.301
5	16.0	51.3	9.6	6.9	0.242
6	20.0	53.5	11.8	7.5	0.204
7	24.0	55.3	13.5	8.0	0.176
8	28.0	56.7	15.0	8.4	0.155
9	32.0	58.4	16.7	8.7	0.138
10	36.0	59.4	17.7	9.0	0.125
11	40.0	60.6	18.8	9.2	0.114
12	44.0	61.3	19.6	9.4	0.105
13	48.0	62.4	20.6	9.6	0.097
14	52.0	63.0	21.3	9.7	0.090
15	56.0	63.8	22.0	9.9	0.084
D 16	60.8	64.7	22.9	10.0	0.078
SECOND FLOW					
E 1	0.0	43.4			
F 2	120.3	43.4	0.0		
SECOND CLOSED-IN					
F 1	0.0	43.4			
G 2	216.2	46.6	3.2	82.1	0.207

REF	MINUTES	PRESSURE	AP	$\frac{t \times \Delta t}{t + \Delta t}$	$\log \frac{t + \Delta t}{\Delta t}$

REMARKS:

TICKET NO: 21284500

CLOCK NO: 13840 HOUR: 24





















GAUGE NO: 5679

DEPTH: 2356.0

REF	MINUTES	PRESSURE	$\Delta P$	$\frac{t \times \Delta t}{t + \Delta t}$	$\log \frac{t + \Delta t}{\Delta t}$
FIRST FLOW					
B	1	0.0	150.3		
	2	2.0	150.7	0.3	
	3	4.0	151.2	0.5	
	4	6.0	152.6	1.4	
	5	8.0	154.1	1.5	
	6	10.0	154.7	0.6	
C	7	12.0	154.6	-0.1	
FIRST CLOSED-IN					
C	1	0.0	154.6		
	2	4.0	157.8	3.2	3.0 0.605
	3	8.0	161.3	6.7	4.8 0.398
	4	12.0	164.4	9.8	6.0 0.300
	5	16.0	166.8	12.2	6.8 0.243
	6	20.0	168.7	14.1	7.5 0.204
	7	24.0	170.7	16.1	8.0 0.176
	8	28.0	172.1	17.5	8.4 0.155
	9	32.0	173.4	18.8	8.7 0.138
	10	36.0	174.5	19.9	9.0 0.125
	11	40.0	175.4	20.8	9.2 0.114
	12	44.0	176.3	21.7	9.4 0.105
	13	48.0	177.3	22.7	9.6 0.097
	14	52.0	177.8	23.2	9.7 0.090
	15	56.0	178.2	23.6	9.9 0.084
D	16	60.8	178.6	24.0	10.0 0.078
SECOND FLOW					
E	1	0.0	155.7		
F	2	120.3	157.8	2.1	
SECOND CLOSED-IN					
F	1	0.0	157.8		
G	2	216.2	161.0	3.3	82.1 0.207

REF	MINUTES	PRESSURE	$\Delta P$	$\frac{t \times \Delta t}{t + \Delta t}$	$\log \frac{t + \Delta t}{\Delta t}$

REMARKS:

		O.D.	I.D.	LENGTH	DEPTH	
1		DRILL PIPE.....	4.500	3.826	1646.3	
3		DRILL COLLARS.....	6.250	2.250	355.0	
50		IMPACT REVERSING SUB.....	6.000	3.000	1.0	2010.0
3		DRILL COLLARS.....	6.250	2.250	90.0	
5		CROSSOVER.....	6.000	3.000	1.0	
13		DUAL CIP SAMPLER.....	5.030	0.870	7.0	
60		HYDROSPRING TESTER.....	5.000	0.750	5.0	2108.5
80		AP RUNNING CASE.....	5.000	2.250	4.0	2110.5
15		JAR.....	5.030	1.750	5.0	
16		VR SAFETY JOINT.....	5.000	1.000	3.0	
70		OPEN HOLE PACKER.....	6.750	1.530	6.0	2126.0
70		OPEN HOLE PACKER.....	6.750	1.530	6.0	2132.0
19		ANCHOR PIPE SAFETY JOINT.....	5.750	1.500	4.0	
5		CROSSOVER.....	6.000	3.000	1.0	
3		DRILL COLLARS.....	6.250	2.250	180.0	
5		CROSSOVER.....	6.000	3.000	1.0	
20		FLUSH JOINT ANCHOR.....	5.750	3.000	37.0	
81		BLANKED-OFF RUNNING CASE.....	5.750	2.440	4.5	2356.5
TOTAL DEPTH					2361.0	
EQUIPMENT DATA						